

## **IN THE SPECIFICATION**

Please amend the first full paragraph of page 2 of the present application as follows:

In case that the liquid crystal is aligned in the homogenous mode, a cell gap corresponding to a ~~reflecting-area~~first area and a cell gap corresponding to a ~~transmitting-area~~second area are different from each other. Especially, when a value of  $\Delta n$  corresponding to the ~~reflecting-area~~first area is  $0.13\ \mu\text{m}$  and a value of  $\Delta n$  corresponding to the ~~transmitting-area~~second area is  $0.26\ \mu\text{m}$ , the cell gap corresponding to the ~~transmitting-area~~second area is twice larger than the cell gap corresponding to the ~~reflecting-area~~first area. If the liquid crystal has an anisotropic refractive index ( $\Delta n$ ) of 0.078, the cell gap corresponding to the ~~reflecting-area~~first area is  $1.7\ \mu\text{m}$  and the cell gap corresponding to the ~~transmitting-area~~second area is  $3.3\ \mu\text{m}$ .

Please amend the second full paragraph of page 2 of the present application as follows:

The cell gap corresponding to the ~~reflecting-area~~first area may be different from the cell gap corresponding to the ~~transmitting-area~~second area due to an organic insulating layer formed on an array substrate. A disclination, however, may occur at a boundary area between the ~~reflecting-area~~first area and the ~~transmitting-area~~second area, and the light may be leaked due to a distorted alignment of the liquid crystal. As a result, an afterimage may appear on a display screen, and a contrast ratio may be lowered.

Please amend the fifth full paragraph of page 3 of the present application as follows:

The upper substrate includes a color pixel, and the color pixel has a first thickness at a position corresponding to a ~~reflecting-area~~first area and a second thickness at a position corresponding to a ~~transmitting-area~~second area, which is thicker than the first thickness.

Please amend the third full paragraph of page 4 of the present application as follows:

In still another aspect of the invention, in a reflective-transmissive type liquid crystal display apparatus that displays an image using an artificial light or a natural light passing through a liquid crystal layer, the reflective-transmissive type liquid crystal display apparatus includes a first substrate, a switching device formed in a pixel area that is defined by a gate line and a source line disposed on the first substrate, an insulating layer formed on the switching device and the first substrate with a contact hole through which the drain electrode is partially exposed, a pixel electrode partially formed on the insulating layer, and connected to the drain electrode through the contact hole, an organic insulating layer formed on the insulating layer and the pixel electrode to expose the insulating layer corresponding to the ~~transmitting area~~second area, an ~~inter-insulating layer~~protecting layer formed on the organic layer corresponding to the ~~reflecting area~~first area, and a reflecting plate disposed on the ~~inter-insulating layer~~protecting layer.

Please amend the third full paragraph of page 5 of the present application as follows:

According to the reflective-transmissive type liquid crystal display apparatus, a portion of the reflecting plate is extended to and overlapped with the ~~transmitting area~~second area depending upon the rubbing direction of the liquid crystal layer. Thus, the reflective-transmissive type LCD apparatus may prevent occurrence of the afterimage and leakage of light, and may enhance a contrast ratio thereof when operated in a transmissive mode.

Please amend the paragraph from lines 22-24 at page 5 of the present application as follows:

FIG. 3 is an enlarged view showing a boundary area between the ~~reflecting area~~first area and the ~~transmitting area~~second area of the reflective-transmissive type LCD apparatus shown in FIG. 2;

Please amend lines 9-25 of page 6 of the present application as follows:

FIG. 8 is an enlarged view showing a boundary area between the ~~reflecting area~~first area and the ~~transmitting area~~second area of the reflective-transmissive type LCD apparatus shown in FIG. 7;

Please amend the paragraphs from lines 14-16 at page 6 of the present application as follows:

FIG. 10 is a plan view showing a reflecting plate partially overlapped with a ~~transmitting area~~second area of a reflective-transmissive type LCD apparatus according to an exemplary embodiment of the present invention;

FIG. 11 is a plan view showing a reflecting plate partially overlapped with a ~~transmitting area~~second area of a reflective-transmissive type LCD apparatus according to another exemplary embodiment of the present invention;

FIG. 12 is a plan view showing a reflecting plate partially overlapped with a ~~transmitting area~~second area of a reflective-transmissive type LCD apparatus according to another exemplary embodiment of the present invention;

FIG. 13 is a plan view showing a reflecting plate partially overlapped with a ~~transmitting area~~second area of a reflective-transmissive type LCD apparatus according to another exemplary embodiment of the present invention; and

Please amend the paragraph from line 25 of page 7 to line 1 of page 8 of the present application as follows:

The reflecting plate 160 includes an edge that is partially extended from the ~~reflecting area~~first area to the ~~transmitting area~~second area and connected to the pixel electrode 150.

Please amend the first full paragraph of page 8 of the present application as follows:

In this exemplary embodiment, the reflecting plate 160 formed on the ~~reflecting area~~first area is partially extended to a transmissive window 145 in consideration of a rubbing direction of an alignment layer (not shown) formed on the array substrate 100,

and connected to the pixel electrode 150 disposed thereunder. Particularly, when viewed the array substrate 100 at an upper position in FIG. 1, the reflecting plate 160 is connected to the pixel electrode 150 due to an extension of edge of the ~~reflecting area~~first area adjacent to bottom and right sides of the transmissive window 145 in case of rubbing the alignment layer in 10 o'clock.

Please amend the paragraph from line 25 of page 8 to line 9 of page 9 of the present application as follows:

Additionally, the array substrate 100 includes the pixel electrode 150 that is formed on the organic insulating layer 144 and connected to the drain electrode 130 through the first contact hole 141, an ~~inter-insulating layer~~protecting layer 152 formed on the pixel electrode 150 and the reflecting plate 160 formed on the ~~inter-insulating layer~~protecting layer 152. The pixel electrode 150 acts as a transmissive electrode through which light is transmitted, and comprises indium tin oxide (ITO), tin oxide (TO) or indium zinc oxide (IZO), etc. Although not shown in FIG. 2, the array substrate 100 may include a capacitor line (not shown) that acts as a storage capacitor with the pixel electrode 150. The capacitor line is formed and spaced apart from the switching device 111 before the pixel electrode 150 is formed.

Please amend the first full paragraph of page 9 of the present application as follows:

In this exemplary embodiment, the reflecting plate 160 is formed on the ~~inter-insulating layer~~protecting layer 152 corresponding to the ~~reflecting area~~first area. The edge of the reflecting plate 160, which is adjacent to the ~~transmitting area~~second area, is partially extended toward the ~~transmitting area~~second area by a predetermined length "L". In FIG. 2, the reflecting plate 160 insulated from the pixel electrode 150 by the ~~inter-insulating layer~~protecting layer 152 disposed therebetween is shown. The ~~inter-insulating layer~~protecting layer 152, however, may be partially removed, so that the reflecting plate 160 may be electrically connected to the pixel electrode 150.

Please amend the first full paragraph of page 10 of the present application as follows:

The liquid crystal layer 300 disposed between the array substrate 100 and the color filter substrate 200 transmits natural light NL passing through the color filter substrate 200 or transmits artificial light AL passing through a transmission window 145 in response to a voltage signal applied to the pixel electrode 150 of the array substrate 100 and a voltage signal applied to a common electrode layer (not shown) of the color filter substrate 200. The liquid crystal layer 300 has a different cell gap at each of a first area at which a first contact hole 141 is formed, a second area at which the first contact hole 141 is not formed and a third area. The first and second areas correspond to the reflection area, and the third area corresponds to the ~~transmitting area~~second area. The cell gap of the liquid crystal layer 300 corresponding to the first area, the cell gap of the liquid crystal layer 300 corresponding to the second area and the cell gap of the liquid crystal layer 300 are represented as d1, d2 and d3, respectively. Here, a thickness of the liquid crystal layer 300 for each different cell gap meets a condition of  $d2 < d1 < d3$ .

Please amend the paragraph from line 25 of page 10 to line 4 of page 11 of the present application as follows:

The cell gap concerning the ~~reflecting area~~first area and the ~~transmitting area~~second area depends upon the liquid crystal molecules of the liquid crystal layer 300 and an optical film disposed on and under the liquid crystal layer 300. In general, the cell gap d2 corresponding to the ~~reflecting area~~first area is less than about 1.7  $\mu\text{m}$ , and the cell gap d3 corresponding to the ~~transmitting area~~second area is less than about 3.3  $\mu\text{m}$ .

Please amend the first full paragraph of page 2 of the present application as follows:

FIG. 3 is an enlarged view showing a boundary area between the ~~reflecting area~~first area and the ~~transmitting area~~second area of the reflective-transmissive type LCD apparatus shown in FIG. 2.

Please amend the third full paragraph of page 12 of the present application as follows:

That is, a portion of the edge of the reflecting plate 160, which is adjacent to the transmission window 145, is extended to the transmission window 145 according to the rubbing direction for the liquid crystal layer 300. Thus, loss of the natural light NL and the artificial light AL due to a transmittance and a reflectance of the reflective-transmissive type LCD apparatus may be reduced. Furthermore, the reflective-transmissive type LCD apparatus may prevent occurrence of the afterimage and leakage of the light caused by a difference of the cell gap between the ~~reflecting area~~first area and the ~~transmitting area~~second area thereof.

Please amend the third full paragraph of page 13 of the present application as follows:

Referring to FIG. 4C, the source-drain insulating layer 140 and the organic insulating layer 144 are successively formed on the resultant structure of the transparent substrate 105 shown in FIG. 4B. Then, the organic insulating layer 144 corresponding to the ~~transmitting area~~second area, and the organic insulating layer 144 and the source-drain insulating layer 140 corresponding to the drain electrode 130 are removed to form the first contact hole 141 and the transmission window 145. In order to enhance a reflection efficiency of the natural light NL incident into the reflecting plate 160 (refer to FIG. 1), an upper surface of the organic insulating layer 144 has a concavo-convex shape.

Please amend the second full paragraph of page 14 of the present application as follows:

Referring to FIG. 4D, the reflecting plate 160 is formed on a position corresponding to the pixel area defined by the gate line 109 and the source line 119. The reflecting plate 160 includes a groove 162 and a protrusion 164 corresponding to the concavo-convex shape of the organic insulating layer 144 so as to enhance the reflection efficiency of the natural light NL. The reflecting plate 160 is also formed on a position corresponding to the ~~reflecting area~~first area, and partially extended to the ~~transmitting area~~second area.

Please amend the first full paragraph of page 16 of the present application as follows:

As shown in FIG. 5D, a reflecting plate 160 is formed on a position corresponding to the pixel area defined by the gate line 109 and the source line 119. The reflecting plate 160 includes a groove 162 and a protrusion 164 corresponding to a concavo-convex shape of the organic insulating layer 144 so as to enhance a reflection efficiency of a natural light NL. The reflecting plate 160 is formed on a position corresponding to a ~~reflecting-area~~first area, and partially extended to the ~~transmitting-area~~second area, thereby partially connecting the reflecting plate 160 to the pixel electrode 151.

Please amend the second full paragraph of page 17 of the present application as follows:

The reflecting plate 460 includes an edge partially extended from the ~~reflecting area~~first area to the ~~transmitting-area~~second area and connected to the pixel electrode 450.

Please amend the third full paragraph of page 17 of the present application as follows:

In this exemplary embodiment, the reflecting plate 460 formed on the ~~reflecting area~~first area is partially extended to the transmissive window 145 in consideration of a rubbing direction of an alignment layer (not shown) formed on the array substrate 400, and connected to the pixel electrode 450 disposed thereunder. Particularly, when viewed the array substrate 400 at an upper position in FIG. 6, the reflecting plate 460 is connected to the pixel electrode 450 due to an extension of edge of the ~~reflecting-area~~first area adjacent to bottom and right sides of the transmissive window 445 in case of rubbing the alignment layer in 10 o'clock.

Please amend the last paragraph of page 18 of the present application as follows:

The liquid crystal layer 300 disposed between the array substrate 400 and the color filter substrate 200 transmits the natural light NL passing through the color filter

substrate 200 or transmits the artificial light AL passing through a transmission window 445 in response to a voltage signal applied to the array substrate 100 and a voltage signal applied to the color filter substrate 200. The liquid crystal layer 300 has a different cell gap at each of a first area corresponding to the ~~reflecting area~~first area and a second area corresponding to the ~~transmitting area~~second area. When the cell gap of the liquid crystal layer 300 corresponding to the first area and the cell gap of the liquid crystal layer 300 corresponding to the second area are represented by  $d_4$  and  $d_5$ , respectively, a thickness of the liquid crystal layer 300 satisfies a condition of  $d_4 < d_5$ .

Please amend the first full paragraph of page 19 of the present application as follows:

Especially, the cell gap concerning the ~~reflecting area~~first area and the ~~transmitting area~~second area depends upon the liquid crystal molecules of the liquid crystal layer 300 and an optical film disposed on and under the liquid crystal layer 300. In general, the cell gap  $d_4$  corresponding to the ~~reflecting area~~first area is less than about 1.7  $\mu\text{m}$ , and the cell gap  $d_5$  corresponding to the ~~transmitting area~~second area is less than about 3.3  $\mu\text{m}$ .

Please amend the last paragraph of page 19 of the present application as follows:

FIG. 8 is an enlarged view showing a boundary area between the ~~reflecting area~~first area and the ~~transmitting area~~second area of the reflective-transmissive type LCD apparatus shown in FIG. 7.

Please amend the second full paragraph of page 20 of the present application as follows:

That is, in order to electrically connect the reflecting plate 460 to the pixel electrode 450, a portion of the edge of the reflecting plate 460, which is adjacent to the transmission window 445, is extended to the transmission window 445 according to the rubbing direction for the liquid crystal layer 300. Thus, loss of the natural light NL and the artificial light AL due to a transmittance and a reflectance of the reflective-



transmissive type LCD apparatus may be reduced. Further, the reflective-transmissive type LCD apparatus may prevent occurrence of the afterimage and leakage of the light caused by a difference of the cell gap between the ~~reflecting area~~first area and the ~~transmitting area~~second area thereof.

Please amend the last paragraph of page 21 of the present application as follows:

An ITO layer is formed on the pixel area defined by the gate line 409 and the source line 419 so as to form the pixel electrode 450. The pixel electrode 450 is electrically connected to the drain electrode 430 through the contact hole 441. The pixel electrode 450 may be formed by forming the ITO layer over the source-drain insulating layer 440 and by patterning the ITO formed on the source-drain insulating layer 440, such that the patterned ITO remains only on the pixel area. Alternatively, the pixel electrode 450 may be formed by forming the ITO only on the pixel area. As shown in FIG. 9C, when a distance L5 where the pixel electrode 450 and the source line 419 are overlapped with each other and a distance L6 where the pixel electrode 450 and the gate line 409 are overlapped with each other become smaller, an opening ratio of a ~~transmitting area~~second area may be enhanced. The gate line 409 overlapped with the pixel electrode 450 acts as a gate line of a previous stage.

Please amend the first full paragraph of page 22 of the present application as follows:

Referring to FIG. 9D, the organic insulating layer 444 is formed on the transparent substrate 405 shown in FIG. 9C. The organic insulating layer 444 is partially patterned to form the transmission window 445, and the ~~inter-insulating layer~~protecting layer 452 and the reflecting plate 460 are successively formed on the organic insulating layer 444. In order to enhance the reflection efficiency of the natural light NL incident into the reflecting plate 460, an upper surface of the organic insulating layer 444 has a concavo-convex shape. The reflecting plate 460 also includes a groove 462 and a protrusion 464 corresponding to the concavo-convex shape of the organic insulating layer 444 so as to enhance the reflection efficiency of the natural light NL.

Please amend the last paragraph of page 22 of the present application as follows:

As described above, in the reflective-transmissive type LCD apparatus having the bottom-ITO structure, the reflecting plate 460 is extended to the ~~transmitting area~~second area, and connected to the pixel electrode 450. Thus, when viewed the array substrate 400 at an upper position thereof, an extension area of the reflecting plate 460 to the ~~transmitting area~~second area has a reversed L-shape in case of rubbing the alignment layer in 10 o'clock, thereby preventing occurrence of afterimage and leakage of light of the reflective-transmissive type LCD apparatus having a non-uniform cell gap.

Please amend the second full paragraph of page 23 of the present application as follows:

FIG. 10 is a plan view showing a reflecting plate partially overlapped with a ~~transmitting area~~second area of a reflective-transmissive type LCD apparatus according to an exemplary embodiment of the present invention. In this exemplary embodiment, a reflecting plate considering occurrence of afterimage and leakage of light when an alignment layer of an array substrate is rubbed in a direction of 10 o'clock will be described.

Please amend the first full paragraph of page 24 of the present application as follows:

As described above, since the lower and right edges of the reflecting plate corresponding to the lower and right portions of the transmission window are extended to the transmission window, the reflective-transmissive type LCD apparatus may prevent occurrence of disclination and leakage of light. The reflective-transmissive type LCD apparatus may further prevent lowering of transmittance because the ~~transmitting area~~second area when only the lower and right edges of the reflecting plate are extended to the transmission window is greater than the ~~transmitting area~~second area when all edges of the ~~reflecting area~~first area are extended to the transmission window.

Please amend the third full paragraph of page 24 of the present application as follows:

FIG. 11 is a plan view showing a reflecting plate partially overlapped with a ~~transmitting area~~second area of a reflective-transmissive type LCD apparatus according to another exemplary embodiment of the present invention. In this exemplary embodiment, a reflecting plate when an alignment layer of an array substrate is rubbed in a direction of 12 o'clock will be described.

Please amend the third full paragraph of page 25 of the present application as follows:

The reflective-transmissive type LCD apparatus may further prevent lowering of transmittance because the ~~transmitting area~~second area when only the lower edge of the reflecting plate is extended to the transmission window is greater than the ~~transmitting area~~second area when all edges of the ~~reflecting area~~first area are extended to the transmission window.

Please amend the last paragraph of page 25 of the present application as follows:

FIG. 12 is a plan view showing a reflecting plate partially overlapped with a ~~transmitting area~~second area of a reflective-transmissive type LCD apparatus according to another exemplary embodiment of the present invention. In this exemplary embodiment, a reflecting plate considering occurrence of afterimage and leakage of light when an alignment layer of an array substrate is rubbed in a direction of 1 o'clock will be described.

Please amend the last paragraph of page 26 of the present application as follows:

The reflective-transmissive type LCD apparatus may further prevent lowering of transmittance because the ~~transmitting area~~second area when only the lower and left edges of the reflecting plate are extended to the transmission window is greater than the ~~transmitting area~~second area when all edges of the ~~reflecting area~~first area are extended to the transmission window.

Please amend the second full paragraph of page 27 of the present application as follows:

FIG. 13 is a plan view showing a reflecting plate partially overlapped with a ~~transmitting area~~second area of a reflective-transmissive type LCD apparatus according to another exemplary embodiment of the present invention.

Please amend the second full paragraph of page 28 of the present application as follows:

The reflective-transmissive type LCD apparatus may prevent lowering of transmittance because the ~~transmitting area~~second area when the lower and right edges of the reflecting plate are extended to the transmission window and the upper and left edges of the reflecting plate are opened is greater than the ~~transmitting area~~second area when all edges of the ~~reflecting area~~first area are extended to the transmission window.

Please amend the last paragraph of page 28 of the present application as follows:

FIGS. 14A to 14D are plan views showing various reflective-transmissive type LCD apparatuses. Particularly, FIG. 14A shows a comparative example 1 that an edge of an opening of a reflecting plate corresponds with a boundary of a ~~transmitting area~~second area, FIG. 14B shows a comparative example 2 that an edge of an opening of a reflecting plate is overlapped with a ~~transmitting area~~second area by about 8  $\mu\text{m}$ , FIG. 14C shows a comparative example 3 that an edge of an opening of a reflecting plate is overlapped with a ~~transmitting area~~second area by about 5  $\mu\text{m}$ , and FIG. 14D shows a comparative example 4 that an edge of an opening of a reflecting plate is spaced apart from a ~~transmitting area~~second area by about 1.5  $\mu\text{m}$ .

Please amend the first full paragraph of page 29 of the present application as follows:

In the comparative example 1 shown in FIG. 14A, a reflecting plate has an opening substantially equal to that of a ~~transmitting area~~second area in size. In this case, since a cell gap of a liquid crystal layer corresponding to a ~~reflecting area~~first area is different from a cell gap of a liquid crystal layer corresponding to the ~~transmitting area~~second area, light may be leaked. Especially, when the reflective-transmissive type LCD apparatus having the reflecting plate as in the comparative example 1 is operated in

a transmissive mode or a reflective mode, a disclination that causes an afterimage does not occur. However, a contrast ratio may be lowered due to leakage of the light in a reversed L-shape when the reflective-transmissive type LCD apparatus is operated in the transmissive mode.

Please amend the second full paragraph of page 29 of the present application as follows:

In the comparative examples 2 and 3 shown in FIGS. 14B and 14C, since the all four edges of the opening of the reflecting plate are overlapped with the ~~transmitting area~~second area, the reflective-transmissive type LCD apparatus may prevent the leakage of the light as described in the comparative example 1. In a comparison of the comparative examples 2 and 3 with the comparative example 1, however, a reflectance of the reflecting plate may be enhanced due to the reflecting plate extended to the ~~transmitting area~~second area, thereby lowering the transmittance of the reflecting plate.

Please amend the second full paragraph of page 30 of the present application as follows:

In case of the comparative example 4, since the ~~transmitting area~~second area increases and the reflecting plate decreases, the transmittance may be enhanced and the reflectance may be lowered.

Please amend the third full paragraph of page 30 of the present application as follows:

As described above, when the reflective-transmissive type LCD apparatus is operated in the transmissive mode, the contrast ratio may be uniformly maintained by partially extending the edges of the opening of the reflecting plate to the ~~transmitting area~~second area in consideration of the rubbing direction of the liquid crystal layer.

Please amend the first full paragraph of page 33 of the present application as follows:

The comparative example 5 is a reflective-transmissive type LCD apparatus having a substantially uniform cell gap, and each of comparative examples 6 to 9 and embodiments 5 to 8 is a reflective-transmissive type LCD apparatus having a non-uniform cell gap. Particularly, a reflective-transmissive type LCD apparatus having the top-ITO structure is used in the comparative examples 6 to 9. The comparative example 6 represents a reflective-transmissive type LCD apparatus that an edge of an opening of a reflecting plate corresponds with a boundary of a ~~transmitting area~~second area. The comparative example 7 represents a reflective-transmissive type LCD apparatus that an edge of an opening of a reflecting plate is spaced apart from a ~~transmitting area~~second area by about 0.5  $\mu\text{m}$ . The comparative example 8 represents a reflective-transmissive type LCD apparatus that an edge of an opening of a reflecting plate is spaced apart from a ~~transmitting area~~second area by about 1.0  $\mu\text{m}$ . The comparative example 9 represents a reflective-transmissive type LCD apparatus that an edge of an opening of a reflecting plate is spaced apart from a ~~transmitting area~~second area by about 1.5  $\mu\text{m}$ .

Please amend the second full paragraph of page 34 of the present application as follows:

In a viewpoint of the white brightness of the transmissive mode, the reflective-transmissive type LCD apparatus having the non-uniform cell gap is superior to the reflective-transmissive type LCD apparatus having the uniform cell gap. As represented by the embodiments 5 to 8, although the edge of the opening of the reflecting plate is partially extended to the ~~transmitting area~~second area, the optical characteristics of the reflective-transmissive type LCD apparatus are similar to those of the reflective-transmissive type LCD apparatus represented by the comparative examples 5 to 8 when the reflective-transmissive type LCD apparatus is operated in the reflective mode or the transmissive mode.

Please amend the last paragraph of page 34 of the present application as follows:

According to the array substrate and the reflective-transmissive type LCD apparatus having the array substrate, the edge that defines the opening of the reflecting plate is partially extended to and overlapped with the transmission window in accordance with the rubbing direction of the liquid crystal layer. Thus, the reflective-transmissive type LCD apparatus may prevent losses of the transmittance and the reflectance thereof, and occurrence of the afterimage and leakage of the light caused by the cell gap difference between the ~~reflecting area~~first area and the ~~transmitting area~~second area may be also prevented.

Please amend the second full paragraph of page 35 of the present application as follows:

Since the reflective-transmissive type LCD apparatus having the bottom-ITO structure does not need the contact hole that directly connects the reflecting plate to the drain electrode of the switching device, the reflective-transmissive type LCD apparatus may enhance the ~~reflecting area~~first area, thereby improving the reflection efficiency.

Please amend the Abstract of the present application as follows:

In an LCD apparatus, a reflecting plate, which is formed on a pixel electrode connected to a switching device formed on an array substrate, defines a ~~reflecting area~~first area from which a natural light is reflected and a ~~transmitting area~~second area through which an artificial light is transmitted. The reflecting plate is partially extended to and overlapped with the ~~transmitting area~~second area depending upon a rubbing direction of the array substrate. Thus, the reflective-transmissive type LCD apparatus may prevent occurrence of the afterimage, and may enhance a contrast ratio thereof when operated in a transmissive mode.

Please delete the paragraph beginning at page 3, lines 7 - 9.

Please delete the paragraph beginning at page 3, lines 20 – 23.

Please delete the paragraph beginning at page 4, lines 8 – 10.

Please delete the paragraph beginning at page 5, lines 5 – 7.

Please replace the paragraph beginning at page 7, lines 11 – 18 as follows:

Referring to FIG. 1, an array substrate 100 (see FIG. 2) includes a gate line 109 extended in a substantially horizontal direction and arranged in a substantially vertical direction, a source line 119 extended in the vertical direction and arranged in the horizontal direction, a switching device TFT formed in an area defined by the gate and source lines 109 and 119, a pixel electrode 150 electrically connected to a drain electrode 130, and a reflecting plate 160 formed on the pixel electrode 150 ~~so as to define a reflecting area from which a natural light is reflected and a transmitting area through which an artificial light is transmitted.~~

Please replace the paragraph beginning at page 12, lines 6 – 8 as follows:

Referring to FIGS. 2 and 3, the reflecting plate 160 formed on the organic insulating layer 144 is partially extended to the transmission window 145 ~~that defines the transmitting area without the organic insulating layer 144 formed thereon.~~

Please replace the paragraph beginning at page 16, lines 13-23 as follows:

Referring to FIG. 6, an array substrate 400 (see FIG. 7) includes a transparent substrate 405 (see FIG. 7), a gate line 409 formed on the transparent substrate 405, extended in a first direction and arranged in a second direction substantially perpendicular to the first direction, a source line 419 disposed on the transparent substrate 405 (see FIG. 7), extended in the second direction and arranged in the first direction, a switching device TFT formed in an area defined by the gate and source lines 109 and 119, a pixel electrode 450 electrically connected to the drain electrode 430, and a reflecting page 460 formed on the pixel electrode 450 ~~so as to define a reflecting area from which a natural light is reflected and a transmitting area or a transmission window 445 through which an artificial light is transmitted.~~

Please replace the paragraph on page 18 beginning at line 2 – 11 as follows:

The array substrate 400 further includes the pixel electrode 450 formed on the source-drain insulating layer 440 and connected to the drain electrode 430 through the contact hole 441, an organic insulating layer 444 formed on the reflecting first area to



cover the switching device 441, ~~an inter-insulating~~ a protecting layer 452 formed on the organic insulating layer 444 and the reflecting plate 460 formed on the ~~inter-insulating~~ protecting layer 452. ~~Hereinafter, an area on which the reflecting plate 460 is formed and an area without the reflecting plate 460 formed thereon are defined as the reflecting area and the transmission window 445, respectively.~~ In order to enhance a reflection efficiency of the natural light NL, a groove 462 and a protrusion 464 are formed on an upper surface of the organic insulating layer 444.

Please replace the paragraph on page 20 beginning at line 2 – 5 as follows:

Referring to FIGS. 7 and 8, the reflecting plate 460 formed on the organic insulating layer 444 is partially extended to the transmission window 445 ~~that defines the transmitting area without the organic insulating layer 144 formed thereon,~~ and electrically connected to the pixel electrode 450.

Please replace the paragraph on page 23 beginning at line 13 – to line 4 on the following page 24 as follows:

Referring to FIG. 10, in each of pixel areas, a reflecting plate is partially opened ~~so as to define a reflecting area from which a natural light is reflected and a transmitting area (transmission window) through which an artificial light is transmitted.~~ The opened area acts as the transmitting second area, and has generally a rectangular shape. In this exemplary embodiment, since the alignment layer of the array substrate is rubbed in a direction of 10 o'clock, a lower edge of the reflecting plate corresponding to a lower portion of the transmission window is extended by RV2'-RV2, so that the lower edge of the reflecting plate is overlapped with the lower portion of the transmission window. A right edge of the reflecting plate corresponding to a right portion of the transmission window is extended by RH2' -RT2, so that the right edge of the reflecting plate is overlapped with the right portion of the transmission window. When the reflective-transmissive type LCD apparatus to which the reflecting plate is applied has a top-ITO, the extended lower and right edges of the reflecting plate may be insulated from the pixel electrode disposed thereunder. When the reflective-transmissive type LCD apparatus to

which the reflecting plate is applied has a bottom-ITO, the extended lower and right edges of the reflecting plate must be connected to the pixel electrode disposed thereunder.

Please replace the paragraph on page 24 beginning at line 21 – line 4 on page 25 as follows:

Referring to FIG. 11, in each of pixel areas, a reflecting plate is partially opened ~~so as to define a reflecting area from which a natural light is reflected and a transmitting area (transmission window) through which an artificial light is transmitted.~~ The opened area acts as the transmitting second area, and has generally a rectangular shape. In this exemplary embodiment, since the alignment layer of the array substrate is rubbed in a direction of 12 o'clock, a lower edge of the reflecting plate corresponding to a lower portion of the transmission window is extended by RV2'-RV2, so that the lower edge of the reflecting plate is overlapped with the lower portion of the transmission window.

Please replace the paragraph on page 26 beginning at lines 3 – 14 as follows:

Referring to FIG. 12, in each of pixel areas, a reflecting plate is partially opened ~~so as to define a reflecting area from which a natural light is reflected and a transmitting area (transmission window) through which an artificial light is transmitted.~~ The opened area acts as the transmitting second area, and has generally a rectangular shape. In this exemplary embodiment, since the alignment layer of the array substrate is rubbed in a direction of 1 o'clock, a lower edge of the reflecting plate corresponding to a lower portion of the transmission window is extended by RV2'-RV2, so that the lower edge of the reflecting plate is overlapped with the lower portion of the transmission window. A left edge of the reflecting plate corresponding to a left portion of the transmission window is extended by RH1' –RH1, so that the left edge of the reflecting plate is overlapped with the left portion of the transmission window.

Please replace the paragraph on page 27 beginning at lines 10 – 24 as follows:

Referring to FIG. 13, in each of pixel areas, a reflecting plate is partially opened ~~so as to define a reflecting area from which a natural light is reflected and a transmitting area (transmission window) through which an artificial light is transmitted.~~ The opened

area acts as the transmitting area, and generally has a rectangular shape. In this exemplary embodiment, when the alignment layer of the array substrate is rubbed in a direction of 10 o'clock, a lower edge of the reflecting plate corresponding to a lower portion of the transmission window is extended by RV2'-RV2, so that the lower edge of the reflecting plate is overlapped with the lower portion of the transmission window. A right edge of the reflecting plate corresponding to a right portion of the transmission window is extended by RH2' -RT2, so that the right edge of the reflecting plate is overlapped with the left portion of the transmission window. A left edge of the reflecting plate corresponding to a left portion of the transmission window is also opened by RH1-RH1', and an upper edge of the reflecting plate corresponding to an upper portion of the transmission window is opened by RV1-RV1'.